

## REMARKS

Claims 1-57 are pending in the application. Claims 40, 41, 43, 45, 47, 49, 51, 53, 55, and 57 are withdrawn from consideration as being directed to non-elected inventions. In the non-final Office Action of October 19, 2005, the Examiner made the following disposition:

- A.) Rejected claims 1-4, 7-11, 18-21, 42, 44, 46, 48, 50, 52, 54, and 56 under 35 U.S.C. §102(b) as allegedly being anticipated by *Goto et al.* (US 2003/0020087).
- B.) Rejected claims 5-6, 12-17, and 22-39 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Goto et al.*
- C.) Rejected claims 1-4, 7-11, 18-21, 42, 44, 46, 48, 50, 52, 54, and 56 under 35 U.S.C. §102(a) as allegedly being anticipated by *Motoki et al.* (US 6,667,184).
- D.) Rejected claims 5-6, 12-17, and 22-39 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Motoki et al.*
- E.) Rejected claims 1, 42, 44, 46, 50, 52, 54, and 56 provisionally under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 79, and 80 of copending Application No. 11/148,771.

Applicants respectfully traverse the rejection and address the Examiner's disposition below.

- A.) Rejected claims 1-4, 7-11, 18-21, 42, 44, 46, 48, 50, 52, 54, and 56 under 35 U.S.C. §102(b) as allegedly being anticipated by *Goto et al.* (US 2003/0020087).

Applicants respectfully traverse the rejection.

Referring to Applicants' Figure 25 as an illustrative example, independent claims 1, 42, 44, 46, 48, 50, 52, 54, and 56, each as amended, each claim a substrate that includes a plurality of stripe-shaped second regions B that are aligned regularly in a first region A made of a crystal. The second regions B have a second average dislocation density that is higher than a first average dislocation density of the first region A. At least one of the second regions B has a c-axis that is inverted relative to the first region.

This is clearly unlike *Goto*, which fails to disclose or suggest a stripe-shaped second region that has a c-axis that is inverted relative to a first region in which the second region is located. Unlike Applicants' claimed invention, *Goto* fails to even discuss axis alignments, let alone the relative c-axis alignments of different regions. Therefore, *Goto* fails to disclose or suggest claims 1, 42, 44, 46, 48, 50, 52, 54, and 56.

Claims 2-4, 7, 8, 18, 20, and 21 depend directly or indirectly from claim 1 and are therefore allowable for at least the same reasons that claim 1 is allowable.

Claims 9-11 and 19 have been canceled.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

B.) Rejected claims 5-6, 12-17, and 22-39 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Goto et al.*

Applicants respectfully traverse the rejection.

Independent claim 1 is allowable over *Goto* as discussed above.

Claims 5-6, 12-17, and 27-39 depend directly or indirectly from claim 1 and are therefore allowable for at least the same reasons that claim 1 is allowable.

Claims 22-26 have been canceled.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

C.) Rejected claims 1-4, 7-11, 18-21, 42, 44, 46, 48, 50, 52, 54, and 56 under 35 U.S.C. §102(a) as allegedly being anticipated by *Motoki et al.* (US 6,667,184).

Applicants respectfully traverse the rejection.

Referring to Applicants' Figure 25 as an illustrative example, independent claims 1, 42, 44, 46, 48, 50, 52, 54, and 56, each as amended, each claim a substrate that includes a plurality of stripe-shaped second regions B that are aligned regularly in a first region A made of a crystal. The second regions B have a second average dislocation density that is higher than a first average dislocation density of the first region A. At least one of the second regions B has a c-axis that is inverted relative to the first region.

The claimed substrate having stripe-shaped second regions beneficially allows a device/structure to be cleaved or diced so that the device/structure has linear edge lines. For example, as shown in Figure 23, when the device/structure 2 is cleaved or diced along its boundaries, the device/structure edges will have linear cleaved edge lines. If the second regions instead had a circular shape (as shown in Figure 16), then the device/structure 2 would have curved edge lines. This is because the separate second regions of Figure 16 pull the cleaved or diced edge lines, causing curvature in the device/structure's edge at each circular second region. On the other hand, the stripe-shaped second regions of the claimed invention do not cause the device/structure's edge lines to be curved.

This is clearly unlike *Motoki*, which fails to disclose or suggest a plurality stripe-shaped second regions that are aligned regularly in a first region made of a crystal. As clearly shown in *Motoki* Figure 7, *Motoki* teaches a plurality of circular second regions Z that are arranged within a first region Y. Unlike Applicants' claimed invention, nowhere does *Motoki* disclose or suggest stripe-shaped second regions.

Further, since *Motoki*'s second regions have a circular shape, then a device/structure that is cleaved or diced from *Motoki*'s substrate would have curved edge lines. This is disadvantageous compared to Applicants' claimed substrate, which would yield a device/structure having linear edge lines, as discussed above.

Therefore, *Motoki* fails to disclose or suggest claims 1, 42, 44, 46, 48, 50, 52, 54, and 56.

Claims 2-4, 7, 8, 18, 20, and 21 depend directly or indirectly from claim 1 and are therefore allowable for at least the same reasons that claim 1 is allowable.

Claims 9-11 and 19 have been canceled.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

D.) Rejected claims 5-6, 12-17, and 22-39 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Motoki et al.*

Applicants respectfully traverse the rejection.

As discussed above, independent claims 1 and 7 are allowable over *Motoki*.

Claims 5-6, 12-17, and 27-39 depend directly or indirectly from claim 1 and are therefore allowable for at least the same reasons that claim 1 is allowable.

Claims 22-26 have been canceled.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

E.) Rejected claims 1, 42, 44, 46, 50, 52, 54, and 56 provisionally under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 79, and 80 of copending Application No. 11/148,771.


Regarding claims 46, 50, and 54, each claim subject matter relating to stripe-shaped second regions being arranged at a first interval in a first direction and at a second interval in a second direction perpendicular to the first direction, in which the second interval is smaller than the first interval. An illustrative example of this claimed subject matter can be found for example in Figure 12. This claimed subject matter is not stated in claims 1, 79, and 80 of Application No. 11/148,771. Therefore, Applicants respectfully submit that the provisional rejection is improper and should be withdrawn.

Regarding claims 1, 42, 44, 52, and 56, as the rejection is merely provisional, Applicants believe that it is premature to file a terminal disclaimer at this time.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-8, 12-18, 20, 21, 27-39, 42, 44, 46, 48, 50, 52, 54, and 56 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

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